

AMENDMENTS TO THE SPECIFICATION

Rewrite the following paragraph on page 8, as follows:

Keyed to an enlarged portion 10c of the shaft 10 as, for example, at 11, are the spacers rotors 12a for axially adjacent discs or rotor plates 12 between which radially opposite hammer bodies or supports 13 may be mounted on circumferentially spaced axially extending rods R extending through opening 13a in the hammer bodies and 13b in the discs 12. In the embodiment shown, discs or plates 12 will have six circumferentially spaced openings 13b to snugly receive the mounting rods R. Figures 19-22 illustrate the manner in which the rods R are releasably locked in position and will later be specifically described. The hammer bodies 13 (Figure 3) include cutter mounting, radially outer head portions 14 having leading faces 14a extending generally radially to the direction of rotation x of the rotor shaft, and trailing faces 14b.

Rewrite the following paragraph bridging pages 8 and 9, as follows:

Referring now more particularly to Figures 1 and 4-7, it will be noted that the cutters, generally designated 15, are provided with radially outer and radially inner fragmenting or cutting edges, generally designated 19 and 20 respectively. The radially outer edges coact with the usual anvil edge A (Figure 1) to cut and fragment the material. Each

of these cutting edges 19, 20 includes a radially constant portion 21 (Figure 4) and a radially inclined portion 22, but, as will be seen, the inclined portions 22 of the respective cutting edges 19 and 20 incline in opposing directions. Typically, the edge portion 21 (Figure 4) may be a half-inch in length when the overall axial width of the cutter is 4 inches. It will be noted that the cutter body is counterbored as at 23 to receive the heads of bolts 16. The angle of inclination of inclined portions 22 may typically be 12° to the surfaces 21.

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Rewrite the following paragraph on page 13, as follows:

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The paths of rotation of the outer knife cutting edges is shown at "y" in Figure 3. The paths of the outer edges of the lobes 27 is shown at "z". It is to be noted that the outer edges of lobes 27 traveling in the paths "z" radially protect the inner edges 20 of each cutter knife 15 during operation, along with also protecting or screening the bolts 16 which hold the cutters 15 in fixed position. Because of the disposition of the lobes 27 on discs 12 in the same radial plane as the knives, wood fragments which might otherwise impinge upon the inner edges 20 and the bolts 16, are deflected in substantial part by the deflector lobes 27.

Rewrite the following paragraph bridging pages 13 and 14, as follows:

In Figure 25, for example, the overall rotor assembly is similar to the rotor assembly RA disclosed in Figure 1, and the hammer assemblies 13 are identical. The rotor assembly RA operates in conjunction with an anvil A of the character disclosed in Figure 1 and rods R, as previously, are used to mount the hammer bodies 13 and associated knives 15, in assembled position. The hammer body openings 13a are, as previously, provided along a circle "c" having a constant radius taken from the axis of shaft 10. In the rotor assembly of Figures 23-27, however, there are no ~~spaeer~~ rotor plates 12 and, as Figure 25 indicates, the fragmenting and cutting edges 19 and 20, which are provided on hammer heads 13, project axially beyond the hammerhead portions 14 to partially axially lap one another. The edges 19 and 20 on the axially adjacent cutters, which are circumferentially closest (adjacent), are not inclined. The cutter head assembly RA, as previously, includes the rod-locking end plate assemblies EP, including end plates 39 which mount the ends of rod R and the locking plates 41 which lock the removable rods R in position.

*Bm*  
Rewrite the following paragraph bringing pages 14 and 15, as follows:

In the prior described rotor assembly, the lobes or humps 27 of generally delta-shape have curvilinear surfaces 27a which are received by the ~~spaeer~~ disc hubs 12a. In the present case, the delta-shaped lobes are replaced by dual deflector lobe members, generally designated 48, having

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keyways 49 or 53, which may secure them on the shaft 10 by way of appropriate keys. Rods R similarly extend through the openings 50 provided in 180° spaced apart relation along circle "c" in the members 48. It will be noted that the members 48 are shaped such as to provide curvilinear surfaces 51 which match the curvilinear surfaces 13b of the hammer bodies 13 on which they are received, and that the screening members 48 are also provided with radially outer lobes 52 having outer peripheral deflecting surfaces 52a. The deflector lobe members or deflectors 48 have substantially the same axial width as the hammer bodies 13 and it will be noted that the peripheral surfaces 52a have the path of rotation previously identified by the letter "z" in Figure 3 and radially protect the inner edges 20 of each cutter 15 during operation, along with also protecting or screening the bolts 16 which hold the cutters 15 in fixed position.

Rewrite the following paragraph on page 17, as follows:

The hard surface tungsten carbide, or other suitable hard surfaced material, which is applied to the face 60a and cutting edge 60, as shown in Figures 35-38, is about one-eighth inch in thickness. As shown in Figure 35, it coats a major portion of wall surface 60a and the front end of bottom surface 66 to protrude from each. It, likewise, as shown in Figures 36 and 37 projects laterally beyond the side walls 65 of the tool bar as at 65a. It is the flat outer surface 66 of

the toolbar, which is engaged by the wedge plate 67 (shown in Figures 28 and 30). Plate 67 has oppositely disposed, similarly inclined wedging surfaces 68 and 69, which respectively engage the toolbar face 66 and the hammer head surface 69 to wedge the toolbar T in rigidly fixed position. A threaded opening 70, provided in wedge plate 67, aligns with a bolt opening 71 through head 14 to receive a bolt 72 which, when revolved in one direction, draws the plate 67 inwardly to tightly clamp toolbar T in position.

*By*  
Rewrite the following paragraph on page 18, as follows:

Fixed in axially spaced relationship along the shaft 10 are a series of rod-supporting rotor members which may take the form of discs, for example, and which are generally designated 72. As Figure 40 indicates, the hammers supports or legs 14 are provided in 180° spaced relation axially adjacent each of the discs 72, on the rods R, which are replaceably mounted as previously disclosed. In the present instance, however, there are a total of 8 rods disposed in 45° apart circumferential relationship. The rods R are locked in

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position by the elements disclosed in Figures 19-22.

Rewrite the following paragraph on page 19, as follows:

The hammers supports or bodies 14 and knife structures 15 may be of the same constructions as previously

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set forth in any of the drawing figures with the salient difference in this embodiment, however, that the head portions 14 tilt forwardly, with respect to a radial line rl extending from the axis of rotation "r", in the direction of rotation of the outer knife edge 19. This forward tilt can be readily ascertained by comparing the radial line rl shown in Figure 40 with the like radial line rl shown in Figure 2 41. Figures 41 and 43 particularly further illustrate this configuration wherein the head portions 14 of the hammers extend at an angle with respect to the hammer body portions 13. Otherwise, the hammers remain effectively the same as those disclosed in the first embodiment of the invention. It has been found that with the hammer head in effect tilting forwardly as disclosed a more aggressive bite is obtained by the tilted knife edges. With respect to the hammers disclosed in Figures 41 and 43, it is to be noted that the body portions 13 include shoulders 73 and that the angle of inclination of the leading face 74 of each of the heads 14 of the modified embodiment extends at substantially an angle of 7° to the radial line rl.

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Rewrite the following paragraph bridging pages 19 and 20, as follows:

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In Figure 45, a modified form of deflector element or member is disclosed generally at 74. The element 74 may be referred to as generally chain-link configured and includes openings 75 permitting its mounting on a pair of the circumferentially adjacent rods R in the axial spaces between

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rotor discs 72 in radial alignment with hammers legs mounted on radially outwardly of the discs 72 and on rods R. Element or member 74 also includes arcuate surfaces 76 for enabling it to clear the shaft 10. One of the members 74 is shown schematically in position in Figure 39. It is to be appreciated that each of the pairs or sets of hammers which are essentially of any of the configurations described herein, are disposed 180° apart in the spaces between discs 72 as shown and are successively helically staggered axially. Thus, the position of the respective hammers shown in Figures 39, 46, and 46A, in which true axial knife overlap is indicated, is never reached. These figures are included to illustrate knife path overlap.

Rewrite the following paragraph on page 20, as follows:

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In Figures 39, 46, and 46A, the dises rotor members involved in these figures have been designated as 72a and 72b. The hammers supports involved have been designated as 13A, 13B, and 13C. It will be assumed that in Figure 46A, only the hammer support 13A is shown in its true position. Hammer support 13B is shown in a broken line position and, of course, would truly be circumferentially displaced from hammer body 13A. However, by showing hammer body or support 13B in a rotated position, it is possible to show the three quarter inch axial path overlap which is achieved.

Rewrite the following paragraph bridging pages 20 and 21, as follows:

With particular attention now to Figure 46 and with the hammer support 13A again being shown in its true position, it is possible to show that when hammer support 13A is in true position, and hammer support 13C is rotated out of true position to the broken line position in Figure 46, an axial path overlap of a quarter of an inch is achieved. This means that the entire axial surface of the work is covered during rotation of the knives, which along the axis r of the rotor have paths of rotation which are entirely axially overlapping, while being displaced circumferentially with respect to one another.

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Rewrite the following paragraph on page 21, as follows:

The diagram, Figure 47, illustrating a further arrangement discloses the various rods or support members designated 1-8 at the left end and illustrates these positions in clockwise arranged vertical position in the hammer-spacer designation part of the diagram. The hammers of Figures 46 and 46A are indicated by the letters X and the deflector members 74 termed spacers by the letters O in the diagram, and the disposition of the members 74 and hammers is well indicated in the spaces g between rotor members or the disc representations 72. As will be seen, there is a deflector member spacer 74 indicated at O for each hammer X and they are

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arranged as indicated in the axial spaces g between the rotor discs or spacers 72 which are numbered 1-18. The disposition of the hammers and spacers deflectors 74 circumferentially is portrayed in the diagram. In this embodiment the hammers are not in true radial alignment in the gaps or spaces g.

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